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# (12) United States Patent Hunze et al.

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#### (54) ENCAPSULATION OF ORGANIC DEVICES

(75) Inventors: Arvid Hunze, Erlangen (DE); Debora Henseler, Erlangen (DE); Karsten Heuser, Erlangen (DE)

(73) Assignee: OSRAM Opto Semiconductors GmbH,

Regensburg (DE)

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## Related U.S. Application Data

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- (51) **Int. Cl. H05B** 33/04 (2006.01)
- (52) **U.S. Cl.** ...... **313/512**; 445/25; 313/504

See application file for complete search history.

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Primary Examiner — Nimeshkumar Patel
Assistant Examiner — Mary Ellen Bowman
(74) Attorney, Agent, or Firm — Cozen O'Connor

## (57) ABSTRACT

Presented an organic light-emitting device (OLED) that includes at least one active region, at least one organic layer, a first glass plate on which the at least one active region is applied, and a second glass plate. The active region is disposed between the first and the second glass plates. The first and second glass plates are at least partially transparent in the near infrared spectral range. The OLED further includes a bonding material that includes a solder glass and is disposed between the first and second glass plates. The bonding material forms at least one frame that surrounds the active region and mechanically connects the first glass plate with the second glass plate and seals the active region. The bonding material absorbs near infrared radiation. The OLED further includes spacer particles that have a mean diameter that maintains a height between the first and second glass plates.

### 12 Claims, 5 Drawing Sheets

